



## Climate change and sustainable food production

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**Author(s):** Smith P, Gregory PJ  
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### Abstract:

One of the greatest challenges we face in the twenty-first century is to sustainably feed nine to ten billion people by 2050 while at the same time reducing environmental impact (e.g. greenhouse gas (GHG) emissions, biodiversity loss, land use change and loss of ecosystem services). To this end, food security must be delivered. According to the United Nations definition, 'food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'. At the same time as delivering food security, we must also reduce the environmental impact of food production. Future climate change will make an impact upon food production. On the other hand, agriculture contributes up to about 30% of the anthropogenic GHG emissions that drive climate change. The aim of this review is to outline some of the likely impacts of climate change on agriculture, the mitigation measures available within agriculture to reduce GHG emissions and outlines the very significant challenge of feeding nine to ten billion people sustainably under a future climate, with reduced emissions of GHG. Each challenge is in itself enormous, requiring solutions that co-deliver on all aspects. We conclude that the status quo is not an option, and tinkering with the current production systems is unlikely to deliver the food and ecosystems services we need in the future; radical changes in production and consumption are likely to be required over the coming decades.

**Source:** <http://dx.doi.org/10.1017/s0029665112002832>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Security

**Food/Water Security:** Agricultural Productivity, Food Access/Distribution, Livestock Productivity

#### Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

#### Geographic Location:

resource focuses on specific location

Global or Unspecified

# Climate Change and Human Health Literature Portal

## Health Impact:

specification of health effect or disease related to climate change exposure

General Health Impact, Malnutrition/Undernutrition

## Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Mitigation

## Resource Type:

format or standard characteristic of resource

Review

## Timescale:

time period studied

Time Scale Unspecified